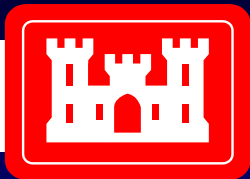




Southern California Background and Potential Research Area Sites



Los Angeles District

SITE SELECTION CRITERIA

- ❖ Device/Methodology
- ❖ Project Monitoring
- ❖ Avoid negative impacts to adjacent shoreline
- ❖ Not adversely affect the aesthetic appeal of the area

RESEARCH AREA SELECTION

- ❖ Site Visits

- ❖ Ventura County – 1 July 2002

- ❖ Northern SD County – 30 July 2002

- ❖ Environmental Assessment

POTENTIAL RESEARCH AREA SITES

- ❖ Oil Piers, Ventura County
- ❖ South Carlsbad State Beach, Carlsbad
- ❖ Moonlight State Beach, Encinitas
- ❖ Fletcher Cove, Solana Beach

RESEARCH AREA DESCRIPTION DEVELOPMENT

- ❖ Development of Research Area Descriptions
 - ❖ Meetings – 11 and 12 September 2002
 - ❖ Objectives
 - ❖ Constraints

OIL PIERS, VENTURA COUNTY

- ❖ Land Owned by County of Ventura and California State Lands Commission
- ❖ Located in northern Ventura County along Highway 101.
- ❖ Named for removed Mobil Oil piers
- ❖ The beach is backed by a rock revetment and bluff.
- ❖ Beach access



Oil Piers Site (1996)

OIL PIERS, VENTURA COUNTY

Design Objectives

- ❖ Innovative design & Initial Beach Fill
- ❖ Sand Sources
- ❖ Preserve/Enhance
 - ❖ Environmental Resources
 - ❖ Recreation
- ❖ Sediment Transport
- ❖ No Significant impacts
 - ❖ Marine Organisms
 - ❖ Recreation
 - ❖ Marine Vegetation
 - ❖ Hard Bottom Habitat



Oil Piers Site Looking Northwest

OIL PIERS, VENTURA COUNTY

Design Requirements

- ❖ Beach Fill Placement Logistics
- ❖ Success Criteria
- ❖ Methodology and Estimated Costs for Removal



Ref: M&N Engineers

Oil Piers Site Looking Northwest

OIL PIERS, VENTURA COUNTY

Site Data Available

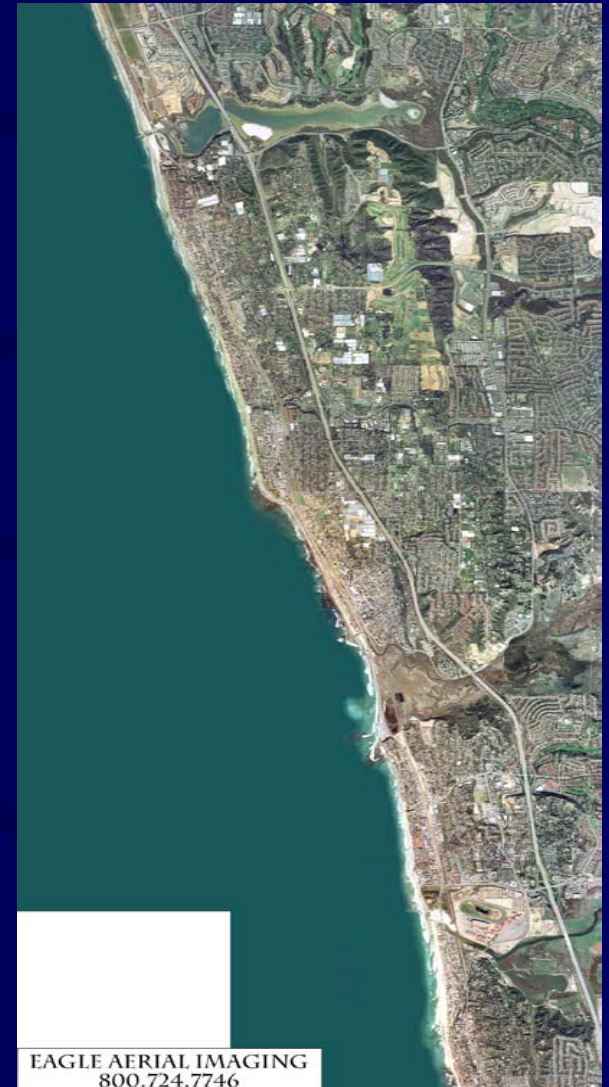
- ❖ Beach Profiles
- ❖ Aerial Photograph (1996)
- ❖ Removal/Piers 97
- ❖ South Central Coast Beach Enhancement Program
- ❖ Other coastal and technical biological studies
- ❖ Data used as baseline information to assess performance



Oil Piers Site Looking South

SOUTH CARLSBAD STATE BEACH, CARLSBAD

- ❖ Land Owned by California State Lands Commission and California Dept. Parks and Recreation
- ❖ Located South of Terramar Point and north of South Carlsbad State Beach campgrounds
- ❖ Existing beach – eroded and flat sandy beach, scattered cobbles and vegetated bluffs
- ❖ Beach access



SOUTH CARLSBAD STATE BEACH

Design Objectives

- ❖ Innovative design & Initial Beach Fill
- ❖ Sand Sources
- ❖ Preserve/Enhance
 - ❖ Environmental Resources
 - ❖ Recreation
- ❖ Sediment Transport
- ❖ No Significant impacts
 - ❖ Marine Organisms
 - ❖ Recreation
 - ❖ Marine Vegetation
 - ❖ Hard Bottom Habitat



South Carlsbad State Beach Looking North

SOUTH CARLSBAD STATE BEACH

Design Requirements

- ❖ Beach Fill Placement Logistics
- ❖ Success Criteria
- ❖ Avoid sewer outfall located 200 feet north of campgrounds
- ❖ Potential Beach Fill Sources - Agua Hedionda Lagoon and Batiquitos Lagoon
- ❖ Methodology and Estimated Costs for Removal



South Carlsbad State Beach Looking South

SOUTH CARLSBAD STATE BEACH

Site Data Available

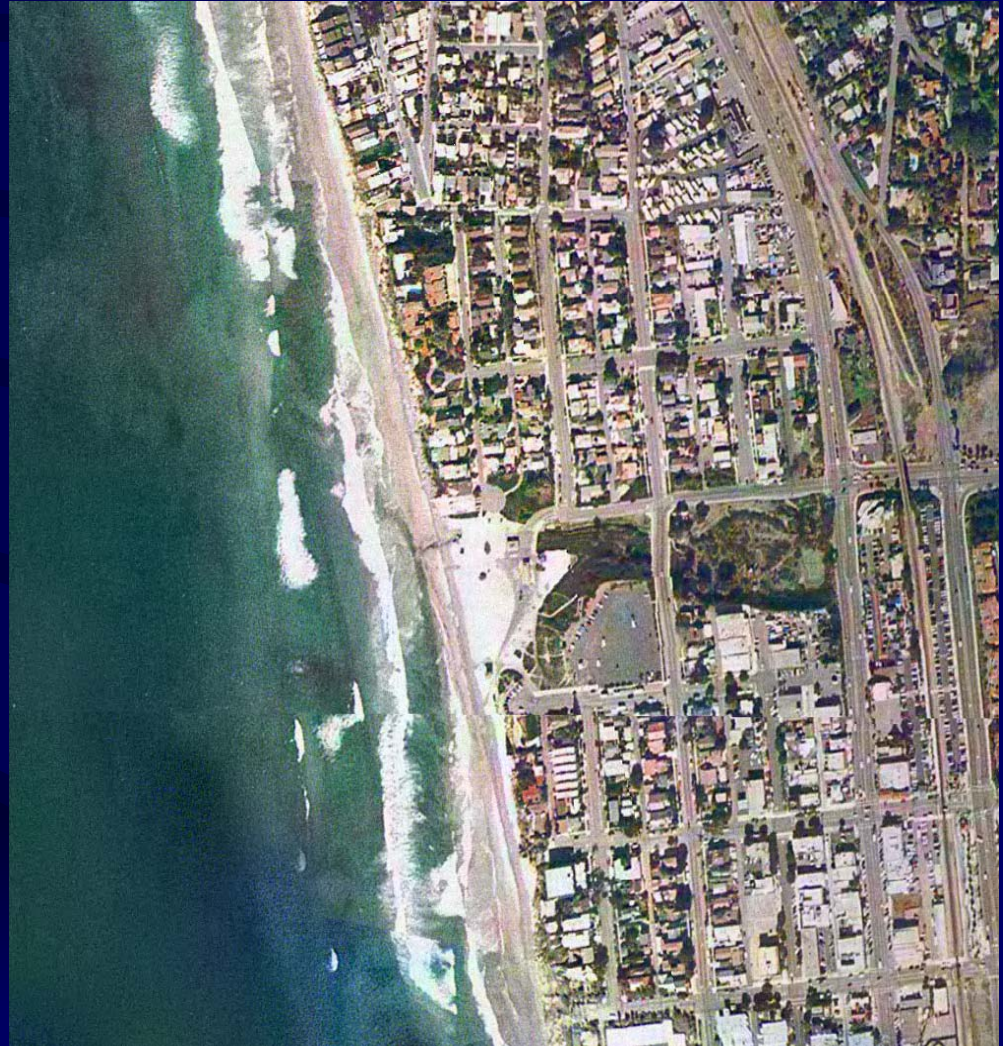
- ❖ Beach Profiles (1986 present)
- ❖ Army Corps Recon Study (1994)
- ❖ Navy Homeporting EIS
- ❖ SANDAG Regional Beach Sand Project EIR (2000)
- ❖ Aerial Ortho-photography (2001)
- ❖ Sediment Transport Study for Agua Hedionda Lagoon (1999)
- ❖ Beach photography library
- ❖ Offshore Mapping for Biological Resources



Bluffs backing South Carlsbad State Beach

MOONLIGHT STATE BEACH, ENCINITAS

- ❖ Land Owned by California Dept of Parks and Recreation and California State Lands Commission
- ❖ Moonlight State Beach is 0.1 miles long at foot of Encinitas Boulevard
- ❖ Gently sloping beach with sand and cobbles
- ❖ Beach access



MOONLIGHT STATE BEACH

Design Objectives

- ❖ Innovative design & Initial Beach Fill
- ❖ Sand Sources
- ❖ Preserve/Enhance
 - ❖ Environmental Resources
 - ❖ Recreation
- ❖ Sediment Transport
- ❖ No Significant impacts
 - ❖ Marine Organisms
 - ❖ Recreation
 - ❖ Marine Vegetation
 - ❖ Hard Bottom Habitat



Moonlight State Beach Looking North

MOONLIGHT STATE BEACH

Design Requirements

- ❖ Beach Fill Placement Logistics
- ❖ Success Criteria
- ❖ Methodology and Estimated Costs for Removal
- ❖ State Parks' General Plan



Moonlight State Beach Looking South

MOONLIGHT STATE BEACH

Site Data Available

- ❖ Beach Profiles (1996 present)
- ❖ Navy Homeporting EIS
- ❖ SANDAG Regional Beach Sand Project EIR (2000)
- ❖ Aerial Ortho-photography (2001)
- ❖ Beach photography library
- ❖ Offshore Mapping for Biological Resources

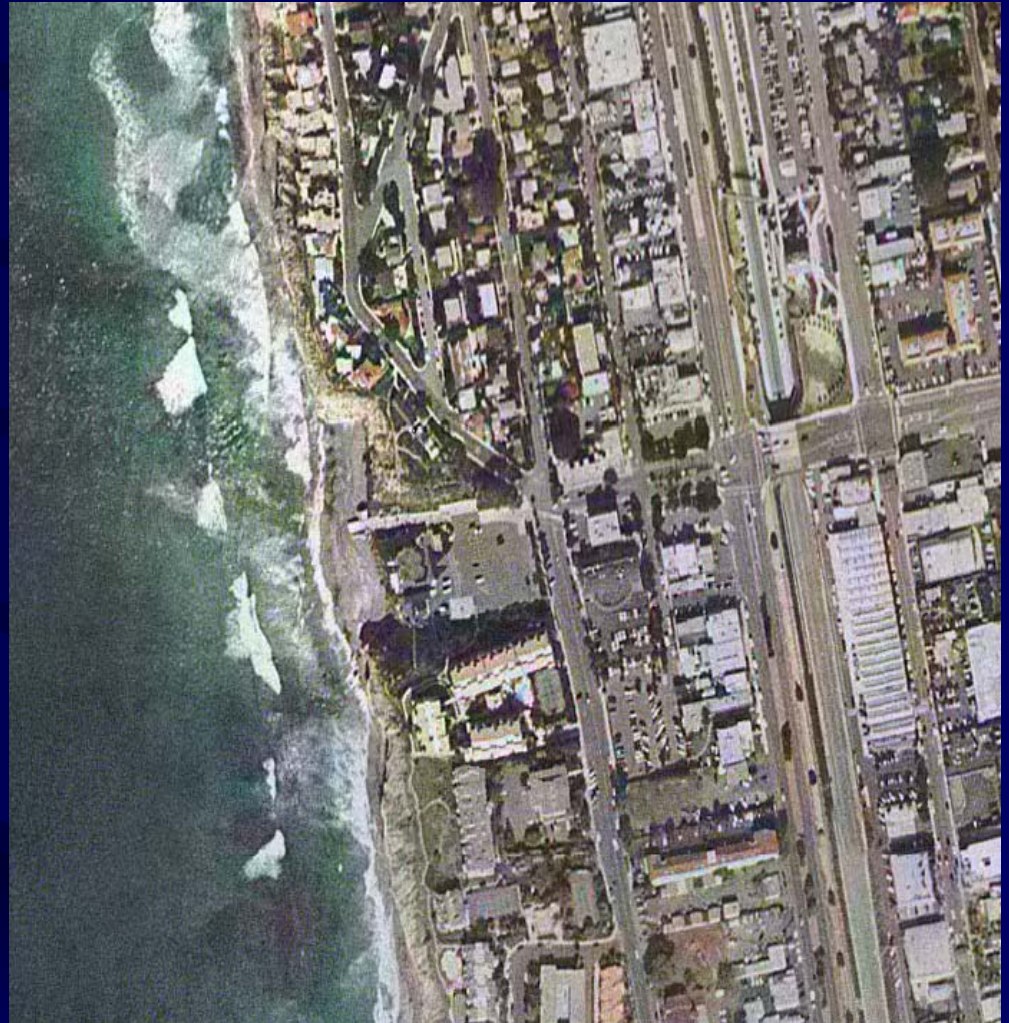
Site



Moonlight State Beach Oblique Aerial

FLETCHER COVE, SOLANA BEACH

- ❖ Land Owned by California State Lands Commission and City of Solana Beach
- ❖ Located western end of Lomas Santa Fe Drive
- ❖ Small sandy beach at low tide
- ❖ Riprap revetment and other shore protection line the adjacent bluffs
- ❖ Beach access



FLETCHER COVE

Design Objectives

- ❖ Innovative design & Initial Beach Fill
- ❖ Sand Sources
- ❖ Preserve/Enhance
 - ❖ Environmental Resources
 - ❖ Recreation
- ❖ Sediment Transport
- ❖ No Significant impacts
 - ❖ Marine Organisms
 - ❖ Recreation
 - ❖ Marine Vegetation
 - ❖ Hard Bottom Habitat



Fletcher Cove Looking South

FLETCHER COVE

Design Requirements

- ❖ Beach Fill Placement Logistics
- ❖ Success Criteria
- ❖ Methodology and Estimated Costs for Removal



Fletcher Cove Looking North

FLETCHER COVE

Site Data Available

- ❖ Beach Profiles (1996 present)
- ❖ Navy Homeporting EIS
- ❖ SANDAG Regional Beach Sand Project EIR (2000)
- ❖ Aerial Ortho-photography (2001)
- ❖ Beach photography library
- ❖ Offshore Mapping for Biological Resources



Fletcher Cove Oblique Aerial

ALL SITE REQUIREMENTS

❖ Environmental Permitting

- ❖ Environmental Assessment
- ❖ Water Quality Certificate
- ❖ California Dept. of Parks and Rec
- ❖ California State Lands Commission
- ❖ California Coastal Commission

❖ Engineering Assessment

- ❖ Stability
- ❖ Predicated Beach Response

LOCAL CONTACTS

- ❖ BEACON: Kevin Ready, 805.568.2950 or ready@co.santa-barbara.ca.us
- ❖ City of Carlsbad Steve Jantz, 760.602.2738 or sjant@ci.carlsbad.ca.us
- ❖ City of Encinitas Katherine Weldon, 760.633.2632 or kweldon@ci.encinitas.ca.us
- ❖ City of Solana Beach Luci Romero-Serlet, 858.720.2430 or lserlet@cosb.org

QUESTIONS??